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NOTES ON GEOGRAPHIC DISTRIBUTION

New records of Orchidaceae in Serra do Cipó, Minas Gerais, Brazil

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ABSTRACT: The occurrences of nine species of Orchidaceae belonging to six genera: *Alatiglossum* (2 species), *Baptistonia* (2), *Cattleya* (1), *Encyclia* (2), *Promenaea* (1) and *Stelis* (1) are noted here for the first time in Serra do Cipó, Minas Gerais state, Brasil. Morphological characters of the genera are briefly described. These new records highlight the importance to preserve the area.

The Espinhaço Range is a mountain complex located between 20°35'S and 11°11'S, extending from the city of Ouro Preto, Minas Gerais to Jacobina, Bahia state, where it receives the name of Chapada Diamantina (Giulietti *et al.* 1987) (Figure 1). The Serra do Cipó is located in the southern portion of Espinhaço Range, in Minas Gerais state, where the high altitudes and rocky soil favor the development of the *campos rupestres* (rocky fields), type of vegetation that grows in shallow quartzite soil above 1000 m.

The family Orchidaceae consists of about 25,000 species (Dressler 2005) in 850 genera (Pridgeon *et al.* 1999; Chase *et al.* 2003), with cosmopolitan distribution, except for the Antarctic region, being more abundant and diversified in tropical and subtropical rain forests. In Brazil, there are more than 2,400 species (Barros *et al.* 2012) and in the Serra do Cipó it is the sixth largest family of angiosperms, comprising approximately 80 species (Giulietti *et al.* 1987). Nevertheless, few taxonomic studies have been carried out on species occurring in the region (Barbero 2007 unpubl. data; Guimarães 2010 unpubl. data). Here we present new records of nine species of Orchidaceae in the Serra do Cipó, providing a more complete knowledge of the plant diversity of the region, and contributing with important data to justify the preservation of the area since Orchidaceae is a family with many endemic species.

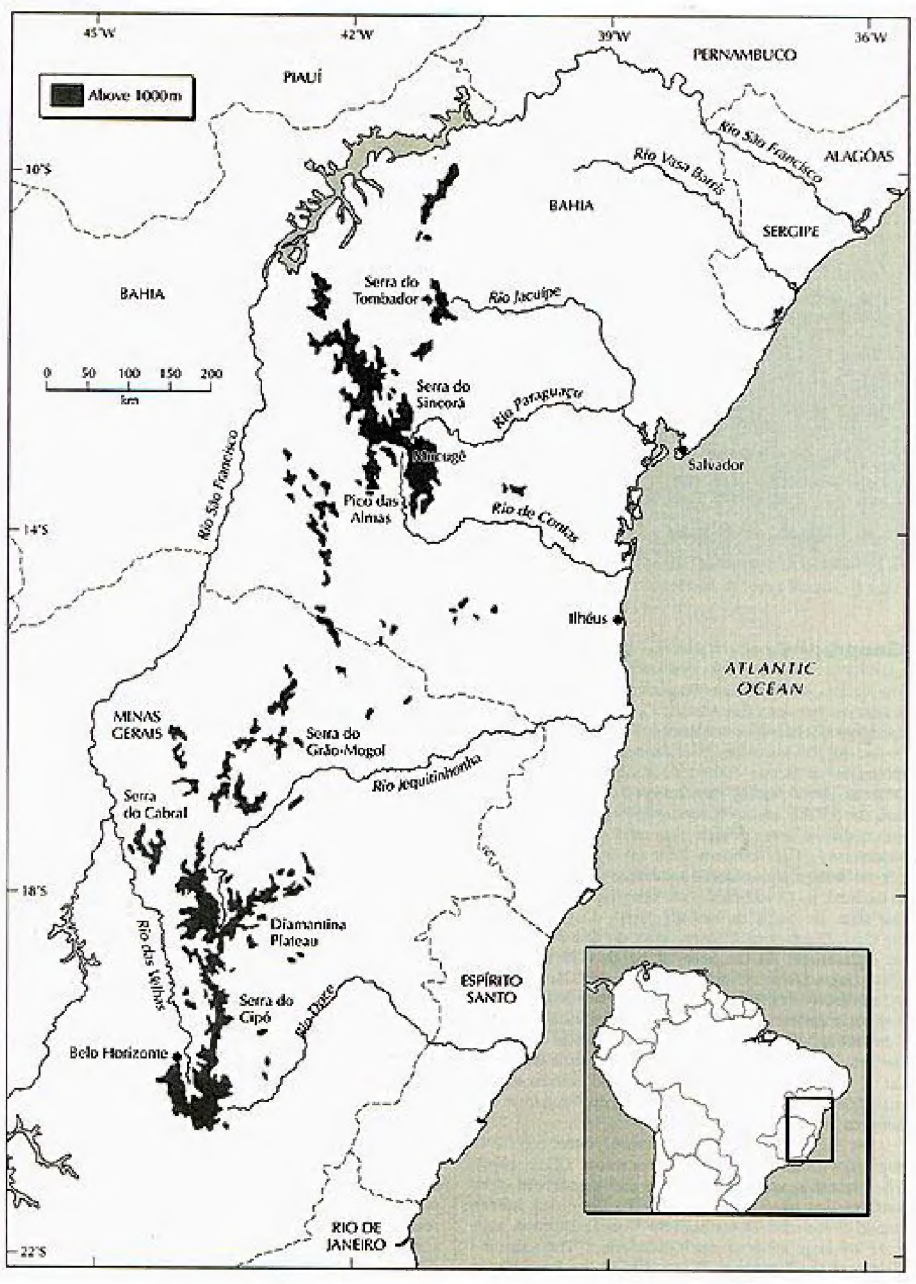

FIGURE 1. Map highlighting areas above 1,000 m altitude of Espinhaço Range.

Records presented here were obtained during field trips in underexplored regions of the Serra do Cipó in January, April and September 2009. All the collected materials were kept in cultivation in the Orquidário do Estado Frederico Carlos Hoehne in the Instituto de Botânica. The vouchers were deposited in the herbarium SP and SPSF (acronyms according to Holmgren *et al.* 1990). The complete taxonomic treatment of the family Orchidaceae in the Serra do Cipó, containing the detailed descriptions of the species, will be published soon (Barros *et al.* in prep.).

Five new genera (*Alatiglossum* D. H. Baptista, *Baptistonia* Barb. Rodr., *Cattleya* Lindl., *Promenaea* Lindl. and *Stelis* Sw.; *Encyclia* had already been listed in Barbero 2007 unpubl. data) and nine new species are recorded for the Serra do Cipó.

Alatiglossum D. H. Baptista (Oncidiinae) has about 16 species of distribution almost restricted to Brazil (mainly in the Atlantic Forest), but also in Argentina and Bolivia (Docha Neto *et al.* 2006). It can be recognized by tetragon sulcate pseudobulbs, connate lateral sepals, trilobed lip with auriculated lateral lobes and isthmus with finely ciliated margins, prominent infrastigmatic tabula, developed lateral wings of the column, and cartilaginous pollinia with stipe and viscidium. We found two species in the Serra do Cipó:

Alatiglossum ciliatum (Lindl.) D. H. Baptista (Figure 2A). Material examined: Minas Gerais, Conceição do Mato Dentro, District of Tabuleiro, riparian forest of Rio Negro.

19°03'83"S, 43°32'25"W, 635 m, *T.L. Laitano et al. 61*, April 5th, 2009 (SPSF).

Alatiglossum uniflorum (Booth ex Lindl.) D. H. Baptista (Figure 2B). Material examined: Minas Gerais, riparian forest of Rio Três Pontinhas. 19°16'08"S, 43°32'66"W, 1258 m, *T.L. Laitano and L.R.S. Guimarães 121*, September 21th, 2009 (SP).

Baptistonia Barb. Rodr. (Oncidiinae) has about 20 species, endemic to the Atlantic Forest in southeastern and southern Brazil, with some species as well in Argentina and Paraguay (Chiron 2007). It is characterized by cylindrical pseudobulbs, concave dorsal sepal, petals longer than the lateral sepals, callus length equal to half of the size of the lip, and cartilaginous pollinia with stipe and viscidium. In the Serra do Cipó, we found two species:

Baptistonia cornigera (Lindl.) Chiron and V. P. Castro (Figure 2C). Material examined: Minas Gerais, Pinheiro Farm (former Pousada Pé da Serra), riparian forest of a creek, next to the Pedra do Elefante. 19°17'38"S, 43°32'39"W, 1193 m, *T.L. Laitano and L.R.S. Guimarães 123*, September 21th, 2009 (SPSF).

Baptistonia pubes (Lindl.) Chiron and V. P. Castro (Figure 2D). Material examined: Minas Gerais, Pinheiro Farm (former Pousada Pé da Serra), riparian forest of a creek, next to the Pedra do Elefante. 19°17'38"S, 43°32'39"W, 1193 m, *L.R.S. Guimarães and T.L. Laitano 150*, September 21th, 2009 (SP).

Cattleya Lindl. (Laeliinae) includes about 40 species (*sensu stricto*), most of them distributed in South America with one species occurring in Costa Rica (van den Berg

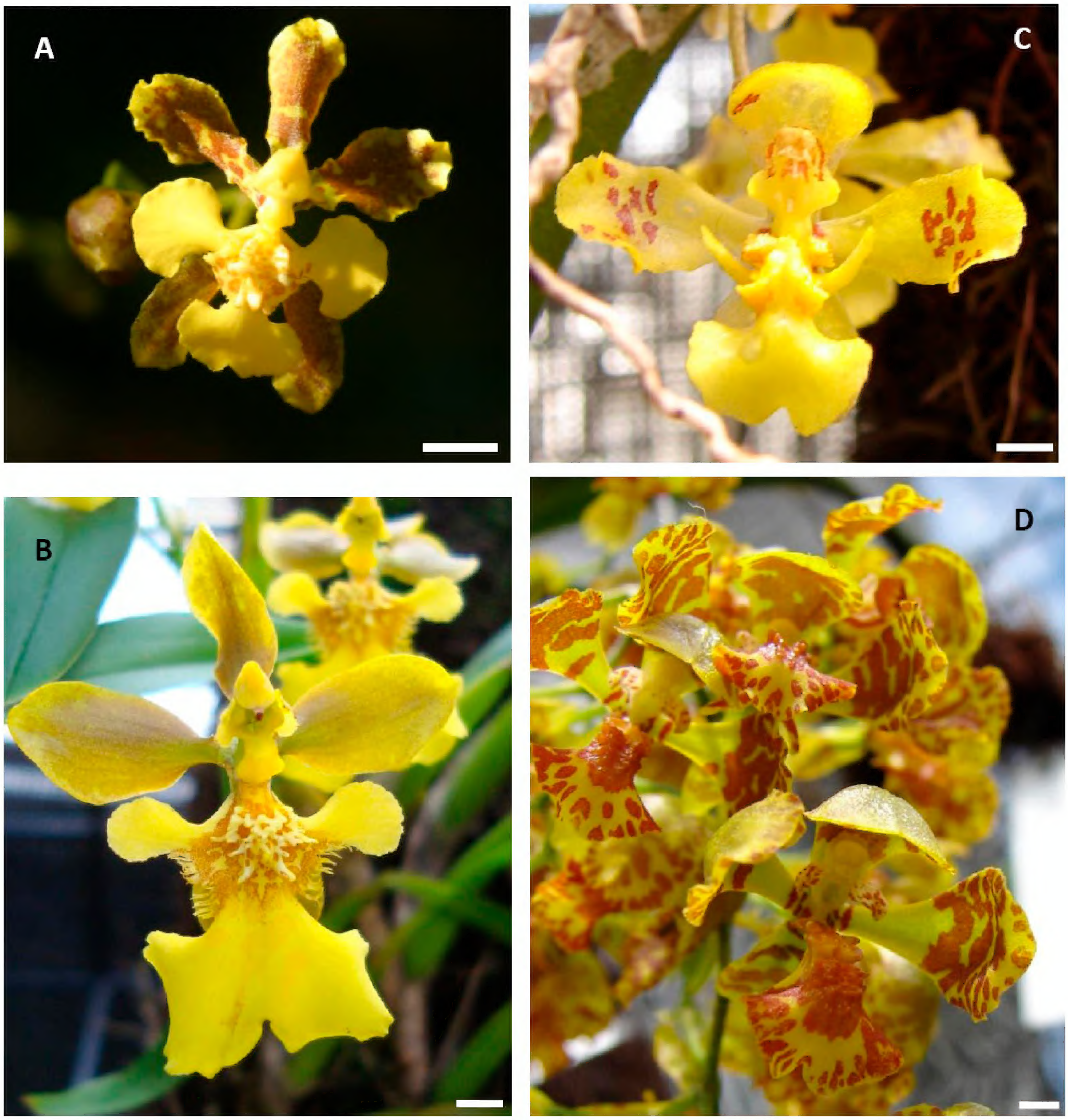

Figure 2. Species of Orchidaceae collected in the Serra do Cipó, Minas Gerais state, Brazil. A: *Alatiglossum ciliatum*. B: *Alatiglossum uniflorum.* C: *Baptistonia cornigera*. D: *Baptistonia pubes*. Photos by Julio Avanzo (A), Túlio L. L. Penha (B, C, D). Scale bars: 1 cm.

2005). It can be recognized by the caulome thickened in pseudobulbs, presence of a spathaceous bract, trilobed lip not adnate to the column, and four ceroid pollinia with caudicules only. In the Serra do Cipó, we found one species:

Cattleya bicolor Lindl. (Figure 3A). Material examined: Minas Gerais, Conceição do Mato Dentro, District of Tabuleiro, Poço Pari. 19°03'74"S, 43°32'86"W, 669 m, *T.L. Laitano et al. 58*, April 8th, 2009 (SPSF).

Encyclia Hook. (Laeliinae) comprises about 120 species, occurring from Mexico to southern Brazil, Paraguay and northern Argentina (van den Berg and Fernández-Concha 2005). It may be recognized by the inflorescence often in panicles, conspicuously trilobed lip, winged column, and four ceroid pollinia with caudicules only. Besides the species cited in Barbero (2007 unpubl. data), two more species were collected in the Serra do Cipó:

Encyclia osmantha (Barb. Rodr.) Schltr. (Figure 3B). Material examined: Minas Gerais, Santana do Riacho, 19°17'83"S, 43°37'49"W, 812 m, *T.L. Laitano et al. 63*, April, 7th, 2009 (SPSF).

Encyclia patens Hook. (Figure 3C). Material examined: Minas Gerais, Santana do Riacho, 19°17'83"S, 43°37'49"W, 812 m, *T.L. Laitano and L.R.S. Guimarães 156*, April 7th, 2009 (SPSF).

Promenaea Lindl. (Zygopetalinae) has about 20 species, endemic to eastern Brazil (Bahia and Southeast and South regions) (Pupulin 2009). It is characterized by the one-flowered inflorescence, lateral sepals adnate to the apex of the column foot, lip with a short unguiculus, and cartilaginous pollinia with stipe and viscidium. In the Serra do Cipó, we found only one species:

Promenaea xanthina (Lindl.) Lindl. (Figure 4A). Material examined: Minas Gerais, Serra do Cipó, Highway MG-010, km 121, behind the statue of Juquinha. 19°15'49"S, 43°33'18"W, 1307 m, *T.L. Laitano et al. 124*, January 22th, 2009 (SPSF).

Stelis Sw. (Pleurothallidinae) encompasses more than 700 species, distributed from Florida, Caribbean, and southern Mexico to Bolivia, Venezuela and Brazil (Pridgeon 2005). The genus is characterized by the relatively small size, lack of pseudobulbs, erect terminal inflorescence, ovary articulated with the pedicel, and two ceroid pollinia. In the Serra do Cipó, we found one species:

Stelis megantha Barb. Rodr. (Figure 4B). Material examined: Minas Gerais, Serra do Cipó, woods behind the Alto do Palácio lodging. 19°15'49"S, 43°31'02"W, 1253 m, *T.L. Laitano and L.R.S. Guimarães 115*, September 19th, 2009 (SP).

FIGURE 3. Species of Orchidaceae collected in the Serra do Cipó, Minas Gerais state, Brazil. A: *Cattleya bicolor*. B: *Encyclia osmantha*. C: *Encyclia patens*. Photos by Julio Avanzo (A), Túlio L. L. Penha (B, C). Scale bars: 1 cm.

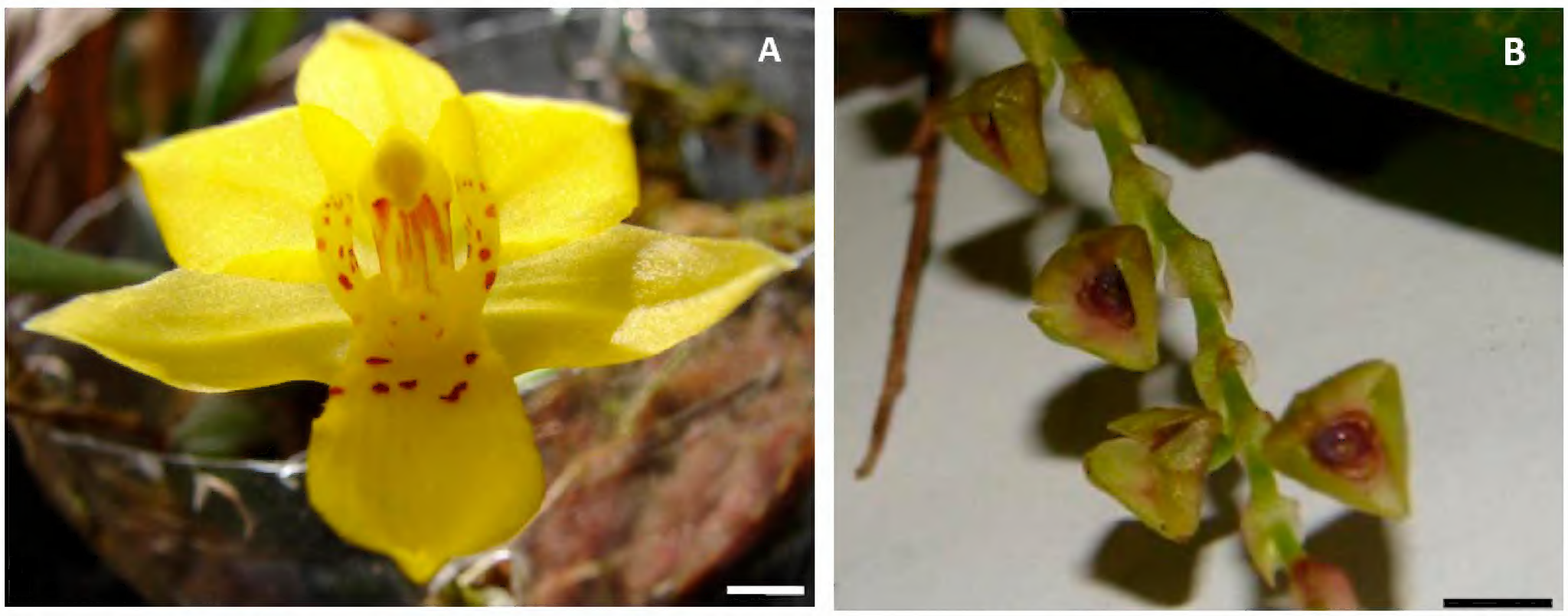

Figure 4. Species of Orchidaceae collected in Serra do Cipó, Minas Gerais state, Brazil. A: *Promenaea xanthina*. B: *Stelis megantha*. Photos by Túlio L. L. Penha. Scale bars: 1 cm.

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